

U.S. Antarctic Marine Living Resources Program

2013/2014 Weekly Field Reports

Cape Shirreff, Livingston Island

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Science Report

Seabirds

1. We conducted the annual chinstrap penguin nest census, starting on 1 December and finishing on 4 December, approximately one week after the peak clutch initiation date. We counted 3552 nests, 15.4% lower than last year's count of 4200 and 34.2% lower than the previous 16-year mean of 5395.
2. We conducted the annual gentoo penguin nest census on 29 November, approximately one week after the peak clutch initiation date. We counted 895 nests, 4.9% higher than last year's count of 853 and 9% higher than the previous 16-year mean of 821.
3. In just over two weeks since gentoo penguin peak clutch initiation, all 50 study nests have completed clutches and 14% have failed. In two weeks since chinstrap penguin peak clutch initiation, 96% of 100 study nests have completed clutches and 5% of total study nests have failed.
4. We continue to resight and monitor banded known-age penguins. To date, 38 known-age gentoo penguins have initiated clutches; 89.5% are incubating partial or full clutches and 10.5% have failed. Currently, 38 known-age chinstrap penguins have initiated clutches; 92.1% continue to incubate partial or full clutches and 7.69% have failed.
5. We continue to monitor brown skua territories for nesting activity. To date, two pairs have one egg, and an additional two pairs are incubating two eggs.
6. There are currently 33 kelp gull nests on the island with eggs.

Pinnipeds

7. We have completed 18 of the 30 fur seal perinatal female captures we have planned. All females have received VHF radio transmitters for monitoring of attendance behavior and trip duration (CCAMLR Ecosystem Monitoring Program protocol). Nine females, thus far, have also received a time depth recorder for monitoring diving effort for the first six trips to sea. Four of these also have GPS Fast-loc technology for recording at sea location. Our CCAMLR trip duration captures began on 1 December and, as of yesterday, no females have left for their first trip.



8. At the last census of fur seal study beaches on 8 December, we recorded a total of 485 pups (471 live and 14 dead). This is a 22% decrease compared to the same time last year.
9. Thus far, 47.4% (65/137) of our tagged female population has returned to Cape Shirreff. The natality rate for returned females thus far is 70.8%. There are, however, still females arriving and pupping and we expect over-winter survival and natality rate to increase.
10. On 7 December we observed the first tagged adult female leopard seal of the season. This is the earliest arrival date for this animal (4 Orange) since she was tagged in 2008.
11. We had a tagged elephant seal arrive that was not tagged at the Cape. It was a juvenile male and also had an alphanumeric clipped into its pelage. This is the fourth such animal observed this season.

Weather

12. This week began with an impressive storm which was followed by several mild, sunny days. While the mean wind speed this week was only 9.7 mph, the maximum was 65 mph. Wind direction was split fairly evenly between the east, west, and south. This was the fifth week in a row featuring a mean temperature below zero. The mean temperature was -0.8°C , the high was 3.3°C and the low was -4.6°C . Total precipitation this week was only 0.1 inches. Sunrise and sunset are now 03:01 and 22:41 as we close in on the longest days of the year. Mean daily solar radiation this week was 24,768 watts per sq. meter reflecting the many days of sun this week.

Camp

13. On the afternoon of 4 December, we were surprised to see a helicopter appear over the mainland glacier. It turned out to represent the arrival of three new Chilean colleagues. All three work for the Chilean Antarctic Institute, INACH, and are here to make improvements to their seasonal field camp, which is located near our own. They bring the total Cape Shirreff human population to eight, which is a 37.5% increase over last week ;-)
14. Earlier that same morning, we spotted a large fishing vessel approximately four miles northeast of our field camp. It was unclear what kind of operations they were conducting but photographs were taken for future consultation.



15. Many large groups of humpback whales have been seen all week foraging off of the north and east sides of the Cape.
16. Around 14:00 on Saturday, 7 December, the Cape was flown over several times by a twin engine propeller plane. It did not respond to hailing on the VHF radio. The plane was Chilean but our recently arrived Chilean colleagues did not know the purpose of the flight.
17. The late spring thaw has caused us to have to bring another 55 gallon barrel of frozen water into the main hut to thaw. We are now on our fourth water barrel. Usually by this week we have put up our rain gutters to collect fresh water but it has been too cold so we have not done this yet.
18. On Tuesday, 3 December, we conducted a medical drill involving all camp personnel. All medical gear/supplies were inspected, our emergency medical support line was contacted and verified, and potential medical problems were discussed.

Presented by Doug Krause and Michelle Goh, with assistance from Kevin Pietrzak, McKenzie Mudge, and Trevor Joyce at the Cape Shirreff Field Camp, Livingston Island, South Shetland Islands, Antarctica

